

IN THE UNITED STATES PATENT OFFICE

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| In re Application of: David A. Monroe |) | Group No.: | 2621 |
| |) | | |
| Serial No.: 09/866,984 |) | Examiner: | Tung Vo |
| |) | | |
| Filed: 29 May 2001 |) | Confirmation No.: | 7399 |
| |) | | |
| For: MODULAR SENSOR ARRAY |) | | |
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MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDED APPEAL BRIEF (37 CFR § 41.37) AND RESPONSE TO OFFICE
COMMUNICATION DATED DECEMBER 12, 2007

Dear Sir:

In response to the Notification of Non-Compliant Appeal Brief mailed December 12, 2007, the Appeal Brief as originally filed has been amended to correct the deficiencies indicated in Paragraphs 4 and 5 of the notification and is submitted herewith.

A Notice of Appeal in accordance with 37 CFR § 41.31 has been filed and appropriate fees as required by 37 CFR § 41.20 have been previously paid. Applicant believes that no extensions of time to file this Response and Amended Appeal Brief are required under 37 CFR 1.136 and that no additional fees are due. However, should any such extensions of time or additional fees be deemed necessary in connection with this Amended Appeal Brief and Response, Applicant respectfully requests such extensions be granted, and the Commissioner is authorized to charge Deposit Account No. 504104, referencing Attorney Docket No. 620002.2.

1. Real Party in Interest

The real party in interest is Symetrics Technology Group, LLC, and an assignment of the application to Symetrics Technology Group, LLC is recorded at the United States Patent and Trademark Office at Reel 017025, Frame 0863.

2. Related Appeals and Interferences

There are no related appeals or interferences known to Appellant that will directly affect, be directly affected by, or have a bearing on a decision rendered by the Board of Patent Appeals and Interferences in the present appeal.

3. Status of the Claims

Claims 65-72 and 74-85 are pending. Claims 1-64 and 73 are previously withdrawn from consideration. All pending claims have been finally rejected, and the final rejection of claims 65-72 and 74-85 is the subject of this appeal. A complete list of the claims as pending is reproduced in the Claims Appendix.

4. Status of Amendments

No amendments have been filed since the date of the final rejection.

5. Summary of Claimed Subject Matter

The present design is directed toward a compact, modular, multi-media, multi-spectral surveillance system providing data capture and management capabilities to field personnel. Specifically, a base module 10 includes a mounting rail system 32 for receiving a plurality of sensor units or modules 36-48 for detecting threat emission data. The data constitutes electromagnetic energy of varying wavelengths and/or other forms of threat emissions (e.g. nuclear, biological, chemical data) [Figs. 1-2; Specification ¶ 3 & 39 as amended] [Note: All numerical and paragraph references are to the Specification and Drawings as

filed and subsequently amended]. The sensor modules include a visual light sensor 36, a high performance night module 40, a forward looking infrared sensor module 42, 44, a radio frequency (RF) probe module 46, an integrated nuclear, biological and chemical sensor module 48, and a laser range finder module 38 [Fig. 1].

A control module or processor is a low power, embedded processor 86 that communicates and functions with an image stabilization sensor 88, a magnetic compass 90, an inclinometer 92, and a GPS receiver 94 integrated into the disclosed system [Fig. 5, Specification ¶ 44]. Further, control processor 86 controls a communication processor 122 [Fig. 5] that works in concert with system control software to facilitate a variety of data processing and operational functions, including but not limited to: shared image processing, filtering, compression and enhancement; shared digital storage of multi-spectral/multi-threat data; shared geo-location of detected targets; shared gain control; optical imaging; a common user interface; electronic/mechanical integration of multiple sensor modules; and integration of mini-servers to deliver data to workstations or other devices/sensors [Fig. 5, Specification ¶ 44-46].

Claim 65

A system for threat emission detection is disclosed. Regarding the specific language of independent claim 65, the preamble states “[a] self-contained security and surveillance system for detecting and processing threat emissions.” Support for the system description is found, for example, in paragraph 9 on page 3 of the Specification. As noted above, the plurality of system sensors 36-48 for interfacing with a hand-held base 10 are disclosed in Fig. 1 and discussed throughout the Specification, for example in paragraph 39, page 9. The sensors include a high performance day channel (36), a laser rangefinder (38), a high performance night channel (40), an uncooled flir (42), a flir (44), an RF probe (46), and an NBC detector (48). A common control

module [Fig. 1] includes the control processor 86 discussed above, which is structured and arranged for “receiving and processing threat emission data.” [Specification ¶ 9, page 3, ¶ 39, page 9, ¶ 44, page 10]. Additionally, claim 65 specifies that the control module includes an image stabilization sensor 88, a real-time image processing module 102, a video switching, decoder, encoder and format conversion module 100, a magnetic compass 90, an inclinometer 92, a GPS receiver 94, and a communication link [e.g. 108, 110, 112], for transmitting received and processed threat emission data to a base station. The above referenced elements, and the corresponding reference numbers, are detailed, for example, in amended FIG. 5. A discussion of the various data processing elements and related hardware may also be found in the Specification, for example at paragraphs 9, 44 - 46, pages 3, 10 and 11 respectively, as well as in Figs 1.

Claim 65 also includes the functionality of the control module discussed in paragraph 39, page 9 of the Specification, to wit the control module is “structured and arranged to receive and process at least one form of threat emission data, the data provided in the form of nuclear, biological, chemical and electromagnetic threat emission data, or combinations thereof.” As noted in the Specification at paragraph 17, page 5 and then again paragraph 46, page 11, “processing of at least one form of threat emission data includes the functionalities of noise reduction, contrast enhancement, motion detection and alarm notification, image stabilization, image cropping, filtering, image compression, gain control, integration of geo-location data, digital data storage, and dynamic changes in control module menus and operations as a function of the sensor module employed.” In summary, a system is disclosed capable of receiving multi-spectral and other threat data, from multiple threat sources, and performing complex processing of the threat data for system use.

Claim 77

Claim 77 recites a “self-contained security and surveillance system” such as that disclosed in claim 65 above, however, independent claim 77 is in the form of a means plus function claim. The specific means plus functions disclosed in independent claim 77 include: (a) “a hand-held receiving means for receiving and processing detected threat emission data”. The corresponding structure is associated with this element of the claim is disclosed in the Specification as a base module 10 with integrated processing capability to include the control processor 86 and communication processor 122 [Fig. 1, 2, 5, Specification ¶ 39, 44]; (b) “a detecting means, removably integrated with the hand-held receiving means, for detecting threat emission data”. The structure of the detecting means includes any one of a suite of sensor modules depicted, for example, in Fig. 1, item numbers 36-48, and discussed in paragraph 39 on page 9 of the Specification. Specifically, the sensor suite includes a high performance day channel (36), a laser rangefinder (38), a high performance night channel (40), an uncooled flir (42), a flir (44), an RF probe (46), and an NBC detector (48); (c) “a communication means for communicating received and processed threat emission data to a base station, which ” incorporates both a wireless communications link and plug-in transmission capability (Specification ¶ 10, page 3, ¶ 45, page 11], to include associated wiring, cabling, communications interfaces, etc. [see e.g. item numbers 108, 110 and 112 of Fig. 5].

The functionality of the system disclosed in claim 77 is described as including “noise reduction, contrast enhancement, motion detection and alarm notification, image stabilization, image cropping, filtering, image compression, gain control, integration of geo-location data, digital data storage, and dynamic changes in control module menus and operations as a function of the sensor module employed.” [Specification, ¶ 46] The various functions apply to nuclear, biological and chemical threats, as well as electromagnetic threat emissions.

Claim 83

Claim 83 recites a “method for receiving and processing at least one form of threat emission data”. The method includes: (a) “removably attaching a sensor module, selected from a plurality of sensor modules, to a base:.. The structure of the sensor modules includes a high performance day channel (36), a laser rangefinder (38), a high performance night channel (40), an uncooled flir (42), a flir (44), an RF probe (46), and an NBC detector (48) to a base module 10 [Fig. 1]; (b) subsequently “detecting and receiving threat data through the sensor module” items 36-48 Fig. 1, and (c) “processing threat emission data”. The processing of threat data is facilitated by structure that includes a control module or control processor 86; an image stabilization sensor 88; a real-time image processing module 102; a video switching, decoder, encoder and format conversion module 100; a magnetic compass 90; an inclinometer 92; and a GPS receiver 94. A discussion of the various data processing elements and related hardware may be found in the Specification, for example at paragraphs 9, 44 - 46, pages 3, 10 and 11 respectively, as well as in Figs. 1 and 5. The above reference numbers are selected from Fig. 5. Beyond processing, the threat emission data is quantified in the processor 86 (Fig. 5) and related hardware, and communicated from the base module 10 (Fig. 1) to a base station.

6. Grounds of Rejection to be Reviewed on Appeal

Claim 65 is rejected under 35 U.S.C. §103(a) as being unpatentable over Shaffer (US 6,411,207) (“Shaffer”) in view of McCann et al (US 5,740,037) (“McCann”). More specifically, it is asserted that Shaffer discloses a self-contained security and surveillance system for detecting and processing threat emissions, and that the Shaffer system includes a hand-held base, a plurality of

sensor modules, a processor, and a communication link. McCann further teaches, according to the Examiner's rejection, a system for warning soldiers of a nuclear, biological, or chemical threat. Therefore, the Examiner asserts that "taking the teachings of Shaffer and McCann as a whole, it would have been obvious to one of ordinary skill in the art to modify the teachings of McCann into the self-contained security and surveillance system of Shaffer in order to providing [sic] advance notice ... to the user of a possible threat." [Office Action dtd 16 March 2007]. Relevant dependent claims, to include claims 66 and 71-75, are rejected on the same basis.

Independent claim 65, as well as independent claims 77 and 83, are rejected under 35 U.S.C. §103(a) as being unpatentable over Shaffer in view of McCann in further view of Kelly (US 5,986,803) ("Kelly"). In addition to the arguments summarized above, the Examiner notes in the rejection that McCann also includes a remote transceiver, a laser range finder, and pre-selected parameters selected from a group consisting of target identification, direction, location, and emission strength. The Examiner asserts that Kelly further teaches a detector or sensor removably integrated with a handheld base, and a contained memory subsystem. The Examiner further argues in the Office Action of 16 March 2007 that Kelly "suggests" the use of "individual components responsive to a common system architecture." The arguments set forth above, with regard to the teachings of McCann, Shaffer and Kelly, also apply, according to the Examiner, to dependent claims 76, 78-82, and 84-85.

Of note, the grounds for rejection summarized above are specifically submitted for review, as discussed below. Applicant respectfully suggests that while the dependent claims that depend from independent claims 65, 77 and 83 are not individually addressed or argued, they are included in the arguments for patentability set forth herein by virtue of their dependence on arguably patentable claims.

7. Argument

The USPTO issued, in October 2007, "Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*" (see Federal Register, Vol. 72, No. 195, pp. 57526-57535). It is instructive to review the rejected claims in light of this guidance. With regard to a 35 U.S.C. §103 rejection, factual inquiries as articulated in *Graham v. John Deere Co.* are still the basis for determining obviousness. After conducting a factual analysis, an Examiner must specify one or more rationale for a rejection, and the rationale may include:

a. Combining prior art elements according to known methods to yield predictable results. This must include:

(1) a finding that the prior art included, alone or in combination, *each element* claimed, *with the only difference* between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference;

(2) a finding that one of ordinary skill in the art could have combined the elements as claimed by known methods, and that in combination, each element *merely* would have performed the same function as it did separately; and

(3) a finding that one of ordinary skill in the art would have recognized that the results of the combination were *predictable*.

In summary, a conclusion of obviousness must include a finding that all the claimed elements were known in the prior art and one skilled in the art could have combined elements as claimed by known methods with no change in their respective functions. Further, the combination would have yielded nothing more than predictable results.

b. Simple substitution of one known element for another to obtain predictable results, to one of ordinary skill in the art at the time of the invention.

c. Use of known technique to improve similar devices in the same way.
Specifically:

(1) a finding that the prior art contained a “base” device upon which the claimed invention can be seen as an “improvement”;

(2) a finding that the prior art contained a comparable device that was improved in the same way as the claimed invention; and

(3) a finding that one of ordinary skill in the art could have applied the known “improvement” technique in the same way to the base device and the results would have been predictable.

In summary, the Examiner must establish through factual analysis that a method of enhancing a *particular class of devices* was made part of the *ordinary capabilities* of one skilled in the art based upon teaching of such improvement in other situations. If the actual application of technique would have been beyond the skill of one of ordinary skill in the art, then using the technique would not have been obvious, hence the claim is not obvious.

d. Applying a known technique to a known device ready for improvement to yield predictable results.

e. Obvious to try, i.e. choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success.

f. Some teaching, suggestion or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or combine prior art reference teachings to arrived a the claimed invention. This should include:

- (1) a finding that there was some teaching, suggestion, or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art; and
- (2) a finding that there was a *reasonable expectation of success*.

Importantly, for any given rationale a-f above, all of the findings for that rationale must be present in order for there to be a determination of obviousness. If even one element is missing, the Examiner may not use the rationale to reject a claim. As discussed in detail below, the Examiner in the present case has failed to articulate a single rationale that meets this stringent requirement.

A. Claim 65 Is Not Obvious in View of the Combination of Shaffer and McCann.

Considering the obviousness argument articulated by the Examiner when rejecting claim 65, there is not a single rationale wherein all the findings are met. This is not a case of simply substituting one element for another, nor is it an example of applying known techniques to a known device ready for improvement. Similarly, there is no basis for asserting obviousness due to the use of known techniques to improve similar devices. There are no similar devices in the prior art that incorporate the complex combination of capabilities recited by Appellant. The arguments put forth by the Examiner, therefore, do not appear to rely on the rationale b-e above, and Appellant would argue that b-e do not apply in the instant case.

The Examiner appears to rely on a relatively simplistic application of the criteria detailed in “a” above to suggest that “combining prior art elements according to known methods ...yield[s] predictable results”, however, the combinations suggested by the Examiner are not feasible or valid given the limitations of the prior art. Stated differently, it cannot be said that the prior art includes each element claimed, *with the only difference* between the claimed

invention and the prior art being the lack of actual combination of the elements in a single prior art reference.

Claim 65 specifically denotes a system wherein a plurality of *multi-spectral* and *other threat data emissions* may be detected, received and processed. A distinguishing feature of the present application is the detection of threat emissions that are more than a simple physical manifestation of an environmental change (e.g. fire, earthquake, temperature). Detection is accomplished, in part, through the use of interchangeable sensors that detect energy over multiple wavelengths (frequencies) of the electromagnetic spectrum. There is absolutely no suggestion in *Shaffer* to use sensors intended to detect electromagnetic energy emissions (e.g. thermal signature, visual signature, RF signature), and *Shaffer* simply relies on a change in the environment to initiate a warning signal [see e.g. *Shaffer* at col. 1, lines 51-60; col. 3, line 6-15].

The inclusion of *McCann* does not cure this fatal deficiency. *McCann* discloses a graphical user interface that receives data signals from external sources including a laser range finder, a video camera, radio communications and/or a GPS subsystem [*McCann* at col. 2, lines 25-31; col. 3, lines 49-59]. These subsystems are not integral or attachable to the receiver/processor unit, and they do not include an IR detection capability, an RF detection capability, or an NBC detection capability. The NBC reference in *McCann*, alluded to by the Examiner, is simply the receipt and presentation of NBC data transmitted from a source other than an integral NBC sensor [*McCann* at col. 7, line 2-7], and there is no suggestion in *McCann* that an NBC sensor is integral to the system. As such, it cannot be said that the combination of *Shaffer* and *McCann* includes most, much less all, of the sensor elements recited in claim 65. Therefore, it is incorrect to suggest the *only difference* between the claimed invention and the prior art is the lack of an actual combination of elements in a single prior art reference.

Still referring to the present application, a complex processing capability is required to process multi-spectral data (e.g. thermal, visual, RF) and transform it into useful information for surveillance and security. This processing includes, as recited in claim 65, noise reduction, contrast enhancement, image stabilization, image cropping, filtering, image compression, and gain control, as well as the hardware required to effect these functionalities. These hardware elements include an image stabilization sensor, a real-time image processing module, and a video switching, decoder, encoder and format conversion module. Not one of these patentably distinct elements (either the functionality disclosed or the corresponding hardware) is found in Shaffer, McCann, or a combination of the two.

Shaffer discloses a very simple processor for “detecting a possible physical threat to a user” [Shaffer at col. 2, lines 65-67 and col. 3, lines 1-5]. The processor generates an alert message “[b]ased upon a set of predefined thresholds.” [Shaffer at col. 3, line 12-15]. Contrast this unsophisticated processor/processing capability with that recited by Appellant in claim 65. Appellant discloses and claims a processor capable of receiving data, recognizing the nature (e.g. frequency band) of the data, processing the data accordingly, storing the data as needed, and transmitting the data to a base station. It is disingenuous to suggest that the processor and related functions disclosed in Shaffer in any way approach those claimed by Appellant, therefore, it cannot be said that Shaffer includes all the elements of the present invention. Without such an assertion, a rejection based on obviousness is invalid. Once again, the combination of Shaffer and McCann does not achieve the Examiner’s desired result. McCann includes a “processing section ... configured to organize information developed ... into a first category, a second category, and a third category, the first, second and third categories each being associated with a respective task ...” [McCann, Claim 1]. Stated differently, McCann discloses categorization of data, not complex data processing. It is not sufficient for the

Examiner to identify similar terms, e.g. processor, in the current application and the prior art, and then to allege these terms refer to a same or similar inventive element. The processing of complex data sets, in a small, hand-held package, is not disclosed in the combination of Shaffer and McCann, nor was it obvious to one skilled in the art prior the filing of Appellant's patent application.

In the interest of completeness, Appellant further argues there is no teaching, suggestion or motivation in the prior art that would have led one of ordinary skill to modify the prior art references, or combine prior art reference teachings, to arrived at the claimed invention. Even if such a suggestion or motivation was found, given the significant technical differences between claim 65 and the cited prior art, there could not be a reasonable expectation of success. Without a teaching, suggestion or motivation to combine references *and* a reasonable expectation of success, there can be no finding of obviousness.

For the reasons articulated above, Appellant respectfully submits that the prior art (Shaffer & McCann), alone or in combination, fails to disclose each element claimed by Appellant, *with the only difference* between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference. Also, given the complexity of integrating multiple sensors and the corresponding processing capability into a small, hand-held device, it cannot be said that one of ordinary skill in the art could have combined the elements as claimed by known methods, and that in combination each element merely would have performed the same function as it did separately. Finally, even if such a combination were somehow suggested by the prior art, which it is not, there could be no reasonable expectation of success. The technical innovations disclosed by Appellant are quite simply patentably distinct. As such, a finding of obviousness with regard to claim 65 is inappropriate, and Appellant respectfully requests the rejection be withdrawn.

B. Claims 65, 77 and 83 Are Not Obvious in View of the Combination of Shaffer, McCann et al and Kelly

Independent claims 77 and 83 disclose substantially the same invention as claim 65. Independent claim 77 is in the form of a “means plus function” claim, whereas independent claim 83 is a “step plus function” claim. As such, the arguments in favor of patentability, and against the Examiner’s rejection, will be presented collectively.

Appellant has previously discussed in detail why a finding of obviousness is inappropriate, with regard to claim 65, based on a combination of Shaffer and McCann. These same arguments apply with equal weight to independent claims 77 and 83. In summary, neither Shaffer nor McCann, alone or in combination, discloses:

- a multi-sensor system capable of receiving and processing both multi-spectral (electromagnetic) data as well as physical environmental (e.g. NBC) data;
- processing hardware and software capable of effecting complex data manipulations on received data;
- a small, portable, hand-held device for integrating the advanced sensing and processing functions.

This is the gist of Appellant’s invention, and it has been shown that the present application as disclosed in claim 65 is not obvious in view of McCann and Shaffer. Claim 77 discloses means for achieving the same data capture and processing recited in claim 65, therefore, claim 77 is also non-obvious in view of the cited prior art. Similarly, claim 83 recites the steps necessary to receive and process the multi-sensor, complex data of the present disclosure, and as such is equally novel, new and unanticipated by a combination of Shaffer and McCann.

The inclusion of Kelly as a third reference, in combination with Shaffer and McCann, does not render the claimed invention obvious under any of the

rationale presented above. For example, interchangeability, in and of itself, is not a patentably distinct element of the present application, as the Examiner seems to suggest, and Kelly is cited for teaching “removably integrated [sensors] with [a] handheld receiving base”. The ability to interchange two visual imaging subsystems, ala Kelly, does not render obvious a multi-spectral sensor system that detects not only visual imagery, but thermal imagery, RF signatures, and NBC contaminants. Kelly does not teach or suggest a plurality of multi-threat, multi-spectral sensors and the related processing capability. Kelly simply discloses a “binocular electronic imaging system” [Kelly at col. 3, line 53] for visual imaging to include a night vision camera [Kelly at col. 3, lines 2-16]. Interchangeable or not, the combination of Kelly’s visual imaging system with the teachings of Shaffer and McCann does not support a finding that all the claimed elements of Appellant’s invention were known in the prior art, and one skilled in the art could have combined elements as claimed by known methods with no change in their respective functions. The integration of sensors disclosed by Appellant, and the processing and storage of captured data in memory, is arguably not that simplistic.

In rejecting claims 65, 77 and 83 for obviousness, the Examiner also discusses the production of modules by a manufacturer as part of a common system architecture. The point of this discussion is somewhat unclear. Once again, the concept of modularity within a common system architecture is not unique, and Appellant does not rely on modularity to distinguish the present disclosure over the prior art. Modularity of sensors having such a broad range of operational capabilities and processing needs is, however, unique and nothing disclosed in Kelly, or the combination of Kelly, Shaffer and McCann, motivates one skilled in the art to attempt such a technological advancement.

For the reasons discussed above, Appellant respectfully submits that the combination of Shaffer, McCann and Kelly does not render the present

application obvious. Appellant requests, therefore, that the rejection of claims 65, 77 and 83 be withdrawn.

C. Dependent Claims

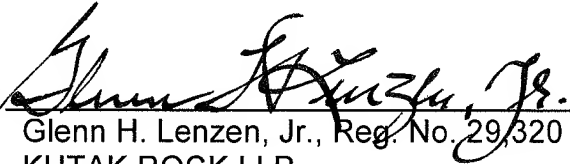
Dependent claims 66-72, 74-76, 77-82, and 84-85 depend from independent claims 65, 77 and 83 respectively. As such, these dependent claims benefit from the arguments for patentability set forth above with regard to the independent claims. Appellant respectfully requests, therefore, that the rejection of the dependent claims be withdrawn as well.

D. Commercial Success

As noted in the Examination Guidelines published in the Federal Register, rebuttal evidence offered in support of patentability may include certain “secondary considerations” to include commercial success. Appellant has had substantial commercial success in the sale of the “modular sensor array” which is the subject of the present application. Appellant has marketed its modular sensor array, as described commercially in its Lightweight Video Reconnaissance System (“LVRS”) brochure, to the U.S. government with great success. Appellant is identified by the government as a “sole source” provider of the technology disclosed in the present application, and has been the recipient in the past of a \$47.9M contract for the LVRS having the modular sensor array. The first order for a modular sensor array was received by Appellant in October of 2001, and orders continue to be received as recently as September 2007. As a secondary consideration, the success of Appellant’s product sales, coupled with its classification as a “sole source” for this technology, is clear indication that the invention as disclosed by Appellant is neither obvious nor previously known to those skilled in the art.

E. Conclusion

In view of the foregoing, Appellant submits that all pending claims are patentably distinct over the prior art cited, and are therefore allowable. Thus the Final Office Action rejecting all claims is in error and should be reversed. As such, Appellant respectfully requests the rejection of independent claims 65, 77 and 83, as well as the claims depending therefrom, be withdrawn and a Notice of Allowance be issued as to all pending claims.

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7. CLAIMS APPENDIX

65. A self-contained security and surveillance system for detecting and processing threat emissions, comprising:

- a plurality of sensor modules for detecting threat emission data;
- a hand-held base for individually and interchangeably interfacing with the plurality of sensor modules;
- a common control module for receiving and processing the threat emission data, wherein the control module includes a control processor, an image stabilization sensor, a real-time image processing module, a video switching, decoder, encoder and format conversion module, a magnetic compass, an inclinometer, and a GPS receiver; and
- a communication link for transmitting received and processed threat emission data to a base station

wherein the control module is structured and arranged to receive and process at least one form of threat emission data, the data provided in the form of nuclear, biological, chemical and electromagnetic threat emission data, or combinations thereof, and further wherein processing of at least one form of threat emission data includes the functionalities of noise reduction, contrast enhancement, motion detection and alarm notification, image stabilization, image cropping, filtering, image compression, gain control, integration of geo-location data, digital data storage, and dynamic changes in control module menus and operations as a function of the sensor module employed.

66. The system of claim 65, wherein at least one sensor module of the plurality of sensor modules is selected from the group consisting of: a visual light sensor module; a high performance night module; a forward looking infrared sensor module; a radio frequency (RF) probe module; an integrated nuclear, biological and chemical sensor module; and a laser range finder module.

67. The system of claim 66, wherein the forward looking infrared sensor module is uncooled.

68. The system of claim 66, wherein the forward looking infrared sensor module is a near-infrared module.

69. The system of claim 66, wherein the forward looking infrared sensor module is a mid-wave infrared module.

70. The system of claim 66, wherein the forward looking infrared sensor module is a long-wave infrared module.

71. The system of claim 65, wherein the base station is remotely located.

72. The system of claim 65, further comprising a remote image transceiver.

73. (Canceled)

74. The system of claim 65, wherein the communication link is selected from a group consisting of: a wireless link and a wired link.

75. The system of claim 65, wherein the base includes a view finder and a display screen.

76. The system of claim 65, wherein the base includes a contained memory subsystem for storing data detected by the plurality of sensor modules.

77. A self-contained security and surveillance system for detecting and processing threat emission data, comprising:

a hand-held receiving means for receiving and processing detected threat emission data;

a detecting means, removably integrated with the hand-held receiving means, for detecting threat emission data; and
a communicating means for communicating received and processed threat emission data to a base station
wherein the hand-held receiving means is structured and arranged to receive and process at least one form of threat emission data, the data provided in the form of nuclear, biological, chemical, and electromagnetic threat emission data, or combinations thereof, and further wherein processing of at least one form of threat emission data includes the functionalities of noise reduction, contrast enhancement, motion detection and alarm notification, image stabilization, image cropping, filtering, image compression, gain control, integration of geo-location data, digital data storage, and dynamic changes in control module menus and operations as a function of the sensor module employed .

78. The system of claim 77, wherein the detecting means is a sensor module selected from a group consisting of: a visual light sensor module; a forward looking infrared sensor module; a RF probe module; a nuclear energy sensor module; biological agent sensor module; a chemical sensor module; and an integrated nuclear, biological and chemical sensor module.

79. The system of claim 77, wherein the hand-held receiving means includes a control processor; an image stabilization sensor; a real-time image processing module; a video switching, decoder, encoder and format conversion module; a magnetic compass; an inclinometer; and a GPS receiver.

80. The system of claim 77, wherein the base station is remotely located.

81. The system of claim 77, wherein the communicating means is wireless.

82. The system of claim 77, further comprising a laser range finder.

83. A method for receiving and processing at least one form of threat emission data, the method comprising:

removably attaching a sensor module, selected from a plurality of sensor modules, to a base;
detecting and receiving threat emission data through the sensor module;
processing the threat emission data, in a control module, the control module having a control processor; an image stabilization sensor; a real-time image processing module; a video switching, decoder, encoder and format conversion module; a magnetic compass; an inclinometer; and a GPS receiver, to quantify pre-established parameters; and
communicating the processed threat emission data from the base to a base station
wherein the processing step includes quantifying threat emission data when received.

84. The method of claim 83, wherein the pre-established parameters are selected from a group consisting of: target identification, direction, location, and emission strength.

85. The method of claim 83, wherein at least one form of threat emission data is provided in the form of nuclear, biological, chemical and electromagnetic threat emission data, or combinations thereof.

8. EVIDENCE APPENDIX

None

9. RELATED PROCEEDINGS APPENDIX

None